REGION 5 UIC CLASS II TECHNICAL REVIEW SHEET (revised 9/18/96)

I. HEADER INFORMATION

County_____ Permit Application #_____

Twnshp, Rnge_____ Operator_____

____1/4 of____1/4 of____1/4 Sect_____ Well_____

____Ft. from N/S line Quarter Section State Permit #_____

____Ft. from E/W line Quarter Section Permit Writer_____

Latitude ____°____'___.___" North

Longitude ____°____'___.___" West

II. WELL STATUS

Existing Date drilled ___/___/___
Converted Date converted ___/___/___
Circle one Proposed New
Proposed Conversion

III. AREA OF REVIEW

AOR map showing well(s) attached to application? _____

How many wells in the AOR penetrate the injection zone? _____

Of these wells, how many are:

T.A.'ed. _____ Construction Adequate? _____

P.A.'ed. _____ Construction Adequate? _____

Producers _____ Construction Adequate? _____

Injectors _____ Construction Adequate? _____

List submitted naming owner(s) of record within the AOR? _____

Map showing landowners within the AOR? _____

IV. UNDERGROUND SOURCES OF DRINKING WATER

Formation name of lowest USDW: _____

Depth to USDW base: _____

Methods of USDW determination:

Atlas _____

Well control _____

Other _____

V. GEOLOGIC DATA OF CONFINING AND INJECTION ZONE

	Injection Zone	Confining Zone
Fm. Name(s)	_____	_____
Lithology	_____	_____
Depth to top	_____	_____
Thickness	_____	_____

What is the separation between the base of the lowest USDW and the top of the injection zone? _____

What method was used to determine maximum injection pressure?

_____ Field Rules (see Federal Register Notices 61084, 61910, 65711)

_____ Fracture Data: Use the ISIP pressure (Attach fracture job charts etc.)

_____ Fracture gradient equation:

[FG - (.433(Sg +.05))] x depth - 14.7 = _____

(Sg = _____) from chemical analysis

(Depth = _____ft.)

(FG = _____psi/ft)

_____ Other (explain) _____

VI. OPERATING DATA

Maximum permitted injection pressure: _____

Maximum permitted injection rate (BPD) (if applicable): _____

Specific gravity from chemical analysis:_____ +.05 = _____

Composition of the annulus fluid: _____

VII. WELL CONSTRUCTION

Total Depth _____ft. Plugged Back Total Depth _____ft.

Formation at T.D. _____

Type of Completion:

Perforations depths _____ to _____ft.

Open hole depths _____ to _____ft.

Packer depth _____ft.

Packer to be set within or below the immediate confining system?_____

Packer to be set within a cemented interval?_____

Cement interval adjacent to casing strings: (use 20% excess)

	Hole	Tubulars				Cemented Interval	
	Size (in)	Size (in)	Weight (lb/ft)	Depths (ft)		Depths (ft)	
				Top	Bottom	Top	Bottom
Conductor Pipe							
Surface Casing							
Intermediate Casing							
Long String Casing							
Liner							

VIII. MECHANICAL INTEGRITY TESTING

Part I Mechanical Integrity:

Type of MIT to be conducted upon well completion:

_____

Part II Mechanical Integrity:

_____ Cement

Proof of cement is/to be demonstrated by submitting:

_____ Signed State completion report

_____ Cementing tickets

_____ Cement Bond Log

_____ Temperature / Noise survey / Oxygen Activation Log

Other logs run:

_____

IX. PLUGGING AND ABANDONMENT

_____ All uncemented casing ripped.

_____ Plug of at least 250 feet set immediately above the top of the injection zone.

_____ 50 feet of cement immediately above cast iron bridge plug. 250 feet is required above cement retainer if situated adjacent to the injection zone.

_____ Cement plug set at least 50 feet above and 50 feet below any rip point.

_____ **If surface casing is not cemented to surface**, cement plug set at least 50 feet below the lowest USDW to surface.

_____ **If surface casing is cemented to surface** and extends below the lowermost USDW, a cement plug from at least 50 feet above the USDW base to 50 feet below the shoe is required and a cement plug from at least 50 feet depth to the surface is required.

_____ **If surface casing is cemented to surface** and the lowermost USDW is below the surface casing setting depth, a cement plug from at least 50 feet below the USDW base to 50 feet above the casing shoe is required and a cement plug from at least 50 feet depth to the surface is required.

_____ **If the lowermmost USDW is less than 500 feet deep**, a continuous cement plug is set from at least 50 feet below the base of the lowermost USDW to the surface.

Explain any variation from the above: _____

_____

X. COMPLIANCE WITH OTHER FEDERAL ACTS

Wild and Scenic Rivers Act: Any designated Wild and Scenic Rivers within the quarter mile AOR? _____

If so, give name(s) _____

Endangered Species Act:

Has the Permit Writer contacted U.S. Fish and Wildlife Service for a list of Endangered or Threatened Species? _____

Written response from U.S. FWS? _____

Any listed species present? _____ If yes, list:_____

National Historic Preservation Act:

State Historic Preservation Office contacted? _____

Historic Resources present? _____

Coastal Zone Management Act:

Is the well located in a Michigan county which borders the Great Lakes?_____

If "yes", then has the permit writer contacted the Michigan Coastal Management Program (CMP) in writing?_____

If the Michigan CMP has not been contacted in writing and the well is located in a Michigan county which borders the Great Lakes, then ensure that the Michigan CMP office is included in the public notice list:

Ms. Cathy Cunningham, Land and Water Management Analyst
Michigan Department of Natural Resources
Division of Land and Water Management
Coastal Management Program, P.O. Box 30458
Lansing, Michigan 48909

Fish and Wildlife Coordination Act:

Does permit application call for diverting, impounding, deepening or controlling any surface water body in excess of 10 acres?_____

XI. FINANCIAL ASSURANCE

Type _____

Amount _____

Provider _____

Standby Trust provided _____

If Blanket Bond coverage:

Is Form VII-10 acceptable? _____

Is the amount equal to 10 times the cost to plug the most expensive injection well in the field or 75% of the total cost to plug all wells? _____

List of all wells covered under the blanket bond provided? _____

If State Bond Coverage:

Has a letter of intent to use this type of bond been submitted by the operator? _____

Has a copy of the state bond been provided? _____

XII. CONFIDENTIALITY

Has any part(s) of this permit application been declared confidential by the operator? _____.

If yes, then specify the confidential parts:_____

Permit writer signature _____ Date:___/___/___